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Traverse rescue A Ferno Group Company

FERNO/TRAVERSE VERTICAL RESCUE STRETCHER

Users' Manual

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Disclaimer

This manual contains general instructions for the use, operation and care of this product. The instructions are not all-inclusive. Safe and proper use of this product is solely at the discretion of the user. Safety information is included as a service to the user. All other safety measures taken by the user should be within and under consideration of applicable regulations. It is recommended that training on the proper use of this product be provided before using this product in an actual situation.

Retain this manual for future reference. Include it with the product in the event of transfer to new users. Additional free copies are available upon request from Customer Service.

Proprietary Notice

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1 - SAFETY INFORMATION

1.1 Warning

The following warnings appear in this manual.

⚠ WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel to operate the stretcher.

Improper use of the stretcher can cause injury. Use the bridle only for the purpose described in this manual.

Improper operation can cause injury. Operate the stretcher only as described in this manual.

An unrestrained or improperly restrained patient can be injured. Secure the patient in the stretcher with a restraint system suitable to the rescue situation.

Modifying the stretcher can cause injury and damage. Use the stretcher only as manufactured and sold by Ferno & Traverse Rescue.

Improper maintenance can cause injury or damage. Maintain the stretcher only as described in this manual.

Improper parts and service can cause injury. Use only Ferno Australia & Traverse Rescue approved parts and service on the stretcher.

An unattended patient can be injured. Stay with the patient at all times.

Attaching improper or inappropriate items to the stretcher can cause injury. Use only Ferno and Traverse Rescue-approved items on the stretcher.

1.2 Important

Boxes like the one below emphasize important information.

Important

Rescue procedures using ropes, harnesses, bridles and other Personal Protective Equipment require special skills and are potentially hazardous activities. No rescue personnel should attempt such rescue procedures unless he or she has received professional instruction and training.

Important

Ensure all straps are fastened and tensioned. DO NOT over tension. Allow for at least one 'flat' hand space between the strap and the patient's body.

1.3 Bloodborne Disease Notice

To reduce the risk of exposure to bloodborne diseases such as HIV-1 and hepatitis when using the stretcher, follow the disinfecting and cleaning instructions in this manual.

1.4 Safety Labels

Labels place important information from the Users' Manual on the stretcher. Read and follow label instructions. Replace worn or damaged labels immediately. The stretcher product label is found at the stretcher's head end. Release Velcro and the label is stitched on the inner flap of material.

A sample of the product label is illustrated below:

ITEM NO: VRES STRETCH	
ITEM NAME: Rescue Stretcher - Roll Up	
SERIAL NUMBER: XXXXXXXXXXXX	DATE OF MANUFACTURE: XX/XXXX
BATCH NUMBER: XXXXX	MAXIMUM WORKING LOAD: Horizontal Lift 350kg Vertical Lift 250kg

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2 - OPERATOR SKILLS AND TRAINING

2.1 Skills

1. Operators using the stretcher need:

- a working knowledge of emergency patient-handling procedures.
- the ability to assist the patient.
- a complete understanding of the procedures described in this manual.
- follow local protocols and guidelines as set down by your organisation

2.2 Training

Trainees need to:

- follow a training program designed or approved by their training officer.
- read this manual. For additional free users' manuals, contact Ferno or Traverse Rescue Customer Service.
- practice with the stretcher before using it in regular service.
- be evaluated and tested on their understanding of the stretcher.
- record their training information. A form is provided on page 17.

⚠ WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel to operate the stretcher.

Important

Rescue procedures using ropes, harnesses, bridles and other Personal Protective Equipment require special skills and are potentially hazardous activities. No rescue personnel should attempt such rescue procedures unless he or she has received professional instruction and training.

3 - ABOUT THE STRETCHER

3.1 Description

The Traverse Vertical Rescue Stretcher (referred to as the stretcher throughout this manual) is designed for high angle, confined space, horizontal and vertical rescue.

- **Ferno Vertical Rescue Stretcher:** Plastic buckles and lifting slings
- **Traverse Vertical Rescue Stretcher:** Metal buckles. No lifting slings

⚠ WARNING

Untrained Operators can cause injury or be injured. Permit only trained personnel to operate the stretcher.

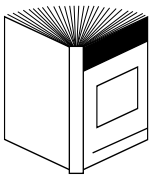
HORIZONTAL LIFTING LOAD LIMIT

VERTICAL LIFTING LOAD LIMIT

3.2 General Specifications

Product Codes	FERNO VERTICAL RESCUE STRETCHER: VRES STRETCH TRAVERSE VERTICAL RESCUE STRETCHER: 19-0100
Length	201 cm/ 79 inches
Width (widest point)	82 cm/ 32 inches
Width (foot end)	45 cm/ 18 inches
Weight	15 kg/ 3 lbs
Rated Load Limit	Horizontal: 350 kg/ 770 lb
	Vertical: 250 kg/ 550 lb
Round Lifting Slings	32kN (VRES STRETCH)
Carry-Lifting Handles/Points	30kN → 3059 kgBF
Ferno and manufacturers of components reserve the right to change specifications without notice.	

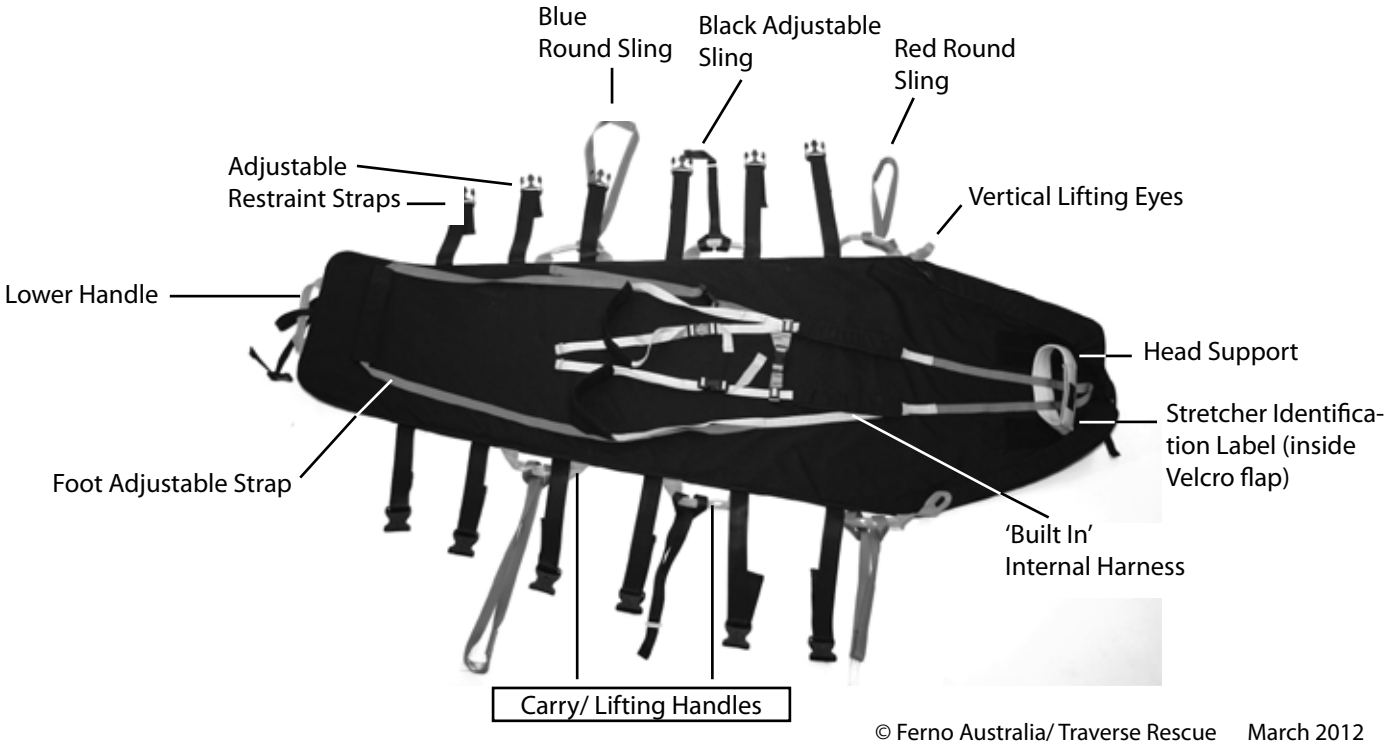
General specifications are rounded to the nearest whole number. Metric conversions are calculated before rounding the English measurements. For more information, contact Ferno or Traverse Rescue Customer Service or your local distributor.



USERS' MANUAL

For additional free Users' Manuals, please call Customer Service or contact your local distributor.

3.3 Stretcher Components



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4 - STRETCHER FEATURES

4.1 Removal from bag

To remove the stretcher from the carry bag that has a built-in back pack system (Fig 1):

1. Release top bag closure by releasing the small quick connect buckles (Fig 2) and unrolling bag lid to gain access to stretcher and remove.
2. Once stretcher is removed from bag, release the strap that keeps the stretcher in a rolled form by unclipping the quick connect buckle (Fig 3)
3. Lay the stretcher on the ground and unroll to its full length and restraints are exposed

Figure 1 - Stretcher carry bag backpack

4.2 Before placing into service

- Remove stretcher from bag and record serial numbers and other relevant information
- thoroughly inspect stretcher and ensure it is damage free

Before and after each use, inspect the stretcher buckles, materials and webbing components. If there are any signs of damage, DO NOT use stretcher and remove it from service immediately.

Figure 2 - Release buckle to undo bag

⚠ WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel to operate the stretcher.

Important

Rescue procedures using ropes, harnesses, bridles and other Personal Protective Equipment require special skills and are potentially hazardous activities. No rescue personnel should attempt such rescue procedures unless he or she has received professional instruction and training.

Figure 3 -Undo buckle to unroll stretcher

4.3 Restraints (Plastic buckles)

A total of 6 external restraints are integrated into the FERNO VERTICAL RESCUE STRETCHER. A built-in harness system that is integral to the unit is supplied within the stretcher.

These restraints supplement equipment you will typically use to tie in a patient in a high-angle scenario. The restraints have been made to an appropriate strength for both horizontal and vertical applications.

The restraints are only for securing the patient into the stretcher and are not to be used for lifting or for any other purpose.

⚠ WARNING

An unrestrained or improperly restrained patient can suffer injuries. Always secure the patient in the stretcher with a restraint system suitable to the rescue operation.

ADJUSTING RESTRAINTS

Restraint straps are fitted with Quick Connect buckles which are plastic buckles comprising male and female interlocking halves.

1. To connect straps, slot the male half into the female buckle half on the corresponding strap (Fig 4)
2. To tighten or shorten the restraint, grasp the tail end of strap and gently pull strap's tail-end away from the buckle (Fig 5)
3. To loosen or lengthen restraint straps, lift the buckle away from the stretcher at an angle of 30° - 40° to release tension between the strap and buckle (Fig 6)
4. To disconnect strap, depress and squeeze the buckle's side tabs inwards. This unlocks and releases the buckle's two halves (Fig 6A).

ATTACHING THE RESTRAINTS

The restraints and straps are part of the integral construction of the stretcher. Select attachment points that will appropriately secure the patient.

This is achieved by securing the patient into the internal harness as well as the external strap system

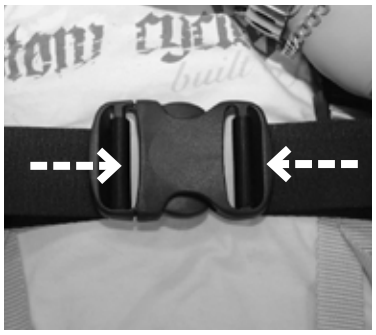

Figure 4 - Quick Connect Buckle - connected

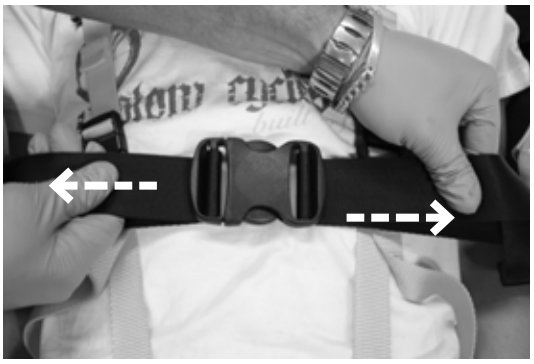

Figure 5 - To tighten, pull strap tails away from buckle

Figure 6 - To loose straps, lift buckle away from stretcher

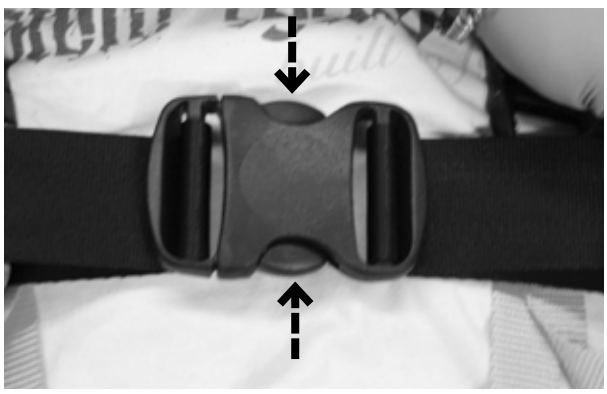

Figure 6A - Depress & squeeze side tabs inwards to release buckle

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4.3.1 Restraints (Metal buckles)

A total of six restraints are included with your TRAVERSE VERTICAL RESCUE STRETCHER. These restraint are typically used to tie-in a patient in a high-angle situation. These restraints are only for securing the patient into the stretcher and are not to be used for lifting or for any other purpose.

FASTENING & TIGHTENING RESTRAINTS

There are two straps, one with a three-bar buckle and one with a two-bar buckle (Fig 7). These buckles are used in conjunction with each other to restrain the patient.

1. Pass the three-bar buckle and webbing upward through the opening in the two-bar buckle (Fig 8). Make sure to pull the free end of the webbing completely through the opening.
2. Pull slightly on the free tail end of the webbing to firmly seat the three-bar buckle on top of the two-bar buckle (Fig 9).
3. Tighten the restraint by pulling on the free end of the webbing. Ensure strap is tensioned so that you can pass the thickness of your flat hand between the strap and patient thus ensuring straps do not restrict the patient's breathing.

LOOSENING & UNFASTENING THE RESTRAINTS

- To loosen a restraint pull the red breakaway tab toward the buckle (Fig 10). Continue pulling until the restraint is as loose as desired.
- To unfasten the restraint, first loosen as described above, then angle the three-bar buckle and pass it downward through the opening in the two-bar buckle (Fig 11).

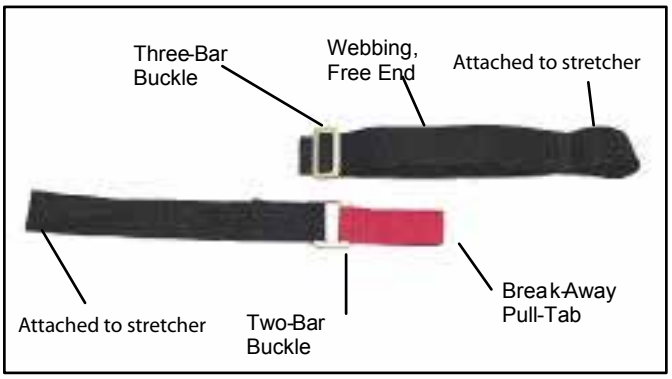

Figure 7 - Components

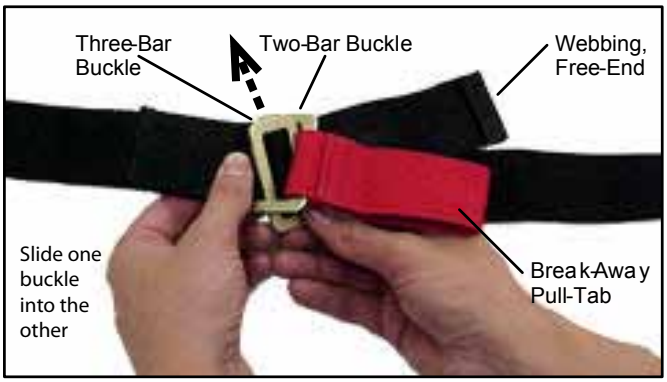

Figure 8 - Fastening the buckle

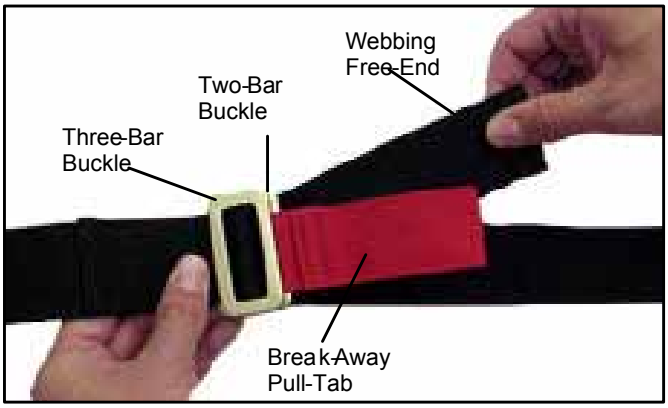

Figure 9 - Seating the buckles

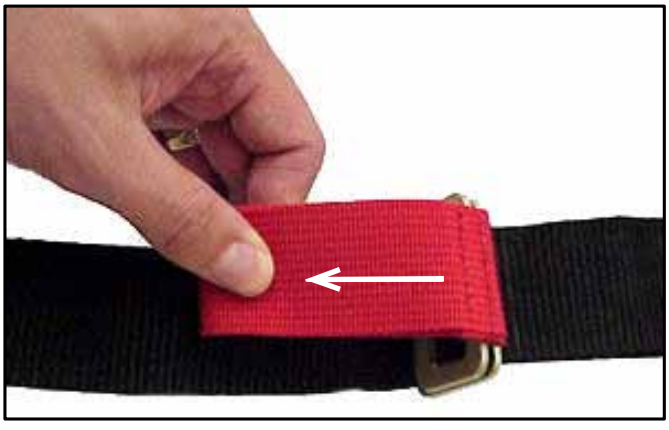

Figure 10 - Loosening the restraint

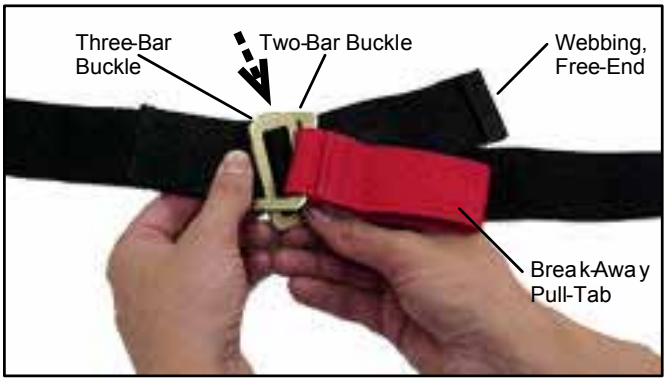

Figure 11 - Unfastening the buckle

5 - GUIDELINES FOR USE

- Using the stretcher requires a minimum of two trained operators. In most situations, operators will want or need additional help. For information about placement and direction of helpers, see Carrying the Stretcher in this manual.
- Follow standard emergency patient-handling procedures when using the stretcher.
- Stay with the patient at all times.Always use the patient restraints provided, as well as a supplementary restraining system as per your training and team protocols, and the situation.
- Personnel using the stretcher in high-angle environments are responsible for learning the proper techniques involved, and for selecting the equipment and procedures best suited to the rescue situation.

6 - PREPARING THE STRETCHER FOR APPLICATION & USE

**NOTE: Plastic buckles are shown. However this technique also applies to metal buckles. Traverse Stretcher does not come standard with lifting slings.*

6.1 Preparing for application

***Once the stretcher has been removed from the carry bag and has been laid out flat, the following procedure must be followed**:*

1. At the stretcher's head end, locate the small strap that forms the head section of the stretcher. Pull on the tail end of the strap and tighten the strap. (Fig 12 & 13)
2. Lay out Blue, Red and Black lifting straps to the outer parameters of the stretcher (Fig 14)
3. Release all the Black restraint straps and lay them flat, towards the outside of the stretcher (Fig 15)
4. Release Blue chest strap buckle and yellow leg and shoulder straps and place to the outside of stretcher (Fig 16)
5. Loosen red foot strap and extend. Loosen Velcro head strap and lay out flat (Fig 16)

Figure 12

Figure 13

Figure 14

Figure 15

Figure 16

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6.2 Patient Placement

Place the patient within the stretcher ensuring the patient's shoulders are approximately at the level of the upper lifting eye. Once the patient is placed into the stretcher using your local protocols and guidelines, the following method of restraint should be used.

1. Place and secure Velcro head strap to patient's forehead (Fig 17).
2. Place yellow shoulder straps over the shoulder and adjust Blue chest strap into desired position by sliding plastic black tabs up or down yellow shoulder strap. Connect blue plastic buckle on blue chest strap (Fig 18).
3. Feed yellow leg strap under each leg through the groin area and connect to yellow shoulder strap. Adjust and tighten yellow leg straps (Fig 19).
4. Feed red leg strap under the hollow of the foot or boot and tighten strap by pulling gently on the tail end of the strap(Fig 20).
5. Take centre black restraint strap and connect the plastic quick connect buckle together. Gently tighten the straps. This will cause the stretcher sides to move towards each other (Fig 21).
6. Continue connecting all the black straps until all are fastened (Fig 22).

Important

Ensure all straps are fastened and tensioned. DO NOT over tension. Allow for at least one 'flat' hand space between the strap and the patient's body.

Figure 17

Figure 18

Figure 19

Figure 20

Figure 21

Figure 22

6.3 Methods of Extraction

NOTE: All orange webbing within the stretcher are lifting points.

There are 4 possible methods of extraction:

1. Carry handle method
2. Integrated lifting bridle method
3. Fabricated lifting Bridle (BRB-VRS) method
4. Sliding the stretcher method

6.3.1 Carry Handle Method

The stretcher is fitted with six carry handles. There should be a minimum of four people carrying the stretcher.

Each operator to grasp carry handle in palm of hand and close hand securely for a good safe grip. In a coordinated action, lift stretcher and carry to required place of evacuation (Fig 23).

Figure 23

Important

Refer to local protocols and Guidelines regarding manual handling and lifting of persons or objects.

Carrying the stretcher requires a minimum of four operators - one on each handle.

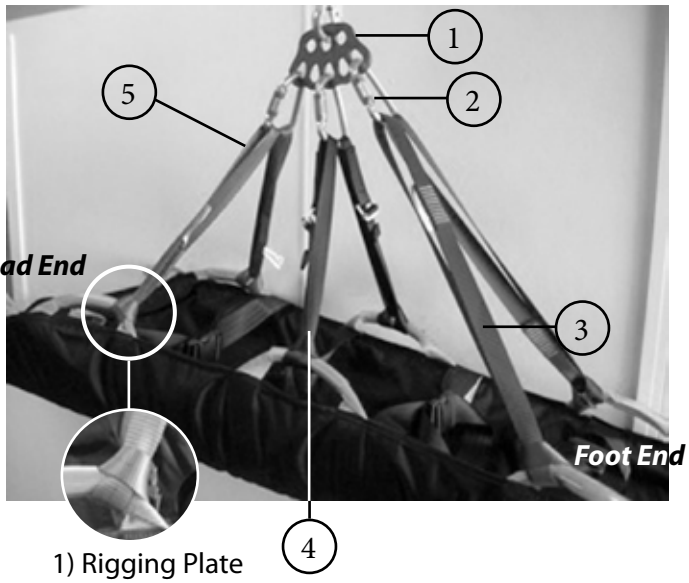
Additional personnel will be helpful or even needed in most situations. Use an even number of personnel and position them to keep the stretcher as even as possible.

Using additional help: Operators should maintain control of the stretcher and direct any helpers or assistants.

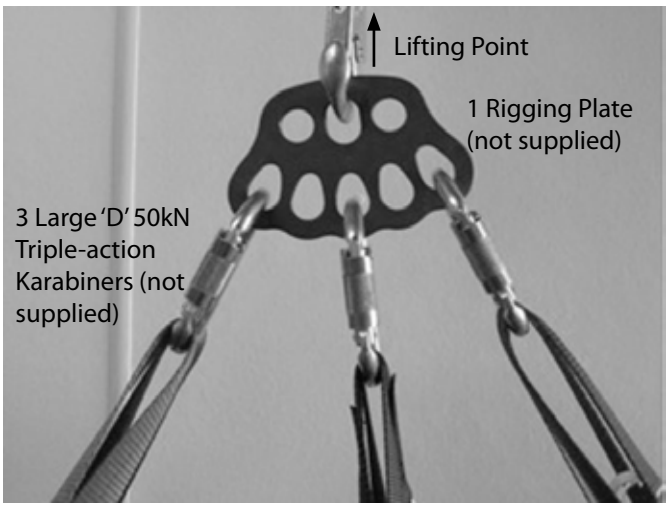
6.3.2 Integrated lifting bridle use

The Ferno Vertical Rescue Stretcher is supplied with the following slings for Horizontal and Vertical rescue lift operations.

To be able to use this function, a rigging plate and 3 karabiners are required (**NOT** supplied with stretcher).



1) Rigging Plate
2) 50kN Large 'D' Triple-action Karabiner
3) Blue Sling
4) Adjustable Black Sling
5) Red Sling



Vertical Rescue Stretcher is supplied with slings

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VERTICAL LIFTING APPLICATION

Ferno recommend the following items be used for this application:

- 1 Rigging Plate (VCT L6370503)
- 2 Triple-action Karabiners

These items are purchased as optional extras and are **not** provided with the Traverse Vertical Rescue Stretcher.

Rigging Plate
2 x 50kN Large 'D' Triple-action Karabiners
Blue slings provided with stretcher
HEAD END
Choke blue sling through orange lifting eye
FOOT END
Place tag line (not supplied) through Orange Handle at Foot End of the stretcher to guide the stretcher during the lift operation

6.3.3 Fabricated lifting Bridle (BRB-VRS)

This is a lifting bridle designed specifically for use with the Ferno/ Traverse Vertical Rescue Stretcher (Fig 24). The bridle is available as an optional accessory.

Refer to the User's Manual for detailed instructions on the TVRS Bridle's use.

Figure 24

6.3.4 Sliding the Stretcher

Only slide the stretcher on its material cover over smooth surfaces. Avoid rock, stumps, branches, asphalt, exposed concrete or other hazards that could penetrate or damage the outer material of the stretcher.

This method should only be used over very short distances as this method may damage outer material on the stretcher.

7 - STORING THE STRETCHER

1. Lay the stretcher on the ground and roll it out so the entire stretcher and its restraints are exposed. Ensure the restraints are buckled but not tensioned (Fig 25)
2. Tightly roll the stretcher starting from the HEAD end towards the Foot end (Fig 26)
3. Once the stretcher is rolled up, secure it by wrapping the retaining strap around the rolled stretcher, fastening the buckle and tightening the retaining strap (Fig 27)
4. Insert the rolled stretcher into its carry bag (Fig 28)
5. Once the stretcher is securely in the bag, seal the bag by folding the lid over several times. To keep the lid closed, secure the two buckles as shown (Fig 29 - 30))

Figure 25

Figure 26

Figure 27

Figure 29

Figure 28

Figure 30

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8 - USING HIGH-ANGLE RESCUE

8.1 Procedures

High angle and rope-access rescue can involve any combination of ropes, winches, pulleys, litter bridles, belay devices and many other specialised items and devices. Proper and safe use of these tools requires professional instruction and training.

When using high-angle or rope-access equipment with the stretcher, ensure the equipment has an adequate load-rating, and that it is at least as great as that of the stretcher.

During a high-angle rescue, the stretcher may be oriented vertically or horizontally. Secure the patient in the stretcher so that he/she does not slip in any direction, or accidentally come out of the stretcher.

⚠ WARNING

An unattended patient can be injured. Stay with the patient at all times.

⚠ WARNING

An unrestrained or improperly restrained patient can suffer injuries. Always secure the patient in the stretcher with a restraint system suitable to the rescue operation.

Important

Personnel using the stretcher in high-angle rescue situations are responsible for knowing the techniques involved and for selecting the equipment and procedures best suited to each rescue situation.

⚠ WARNING

Untrained operators can cause injury or be injured. Permit only trained personnel to operate the stretcher.

9 - MAINTAINING THE STRETCHER

9.1 Maintenance Schedule

The stretcher requires regular maintenance. Set up and follow a maintenance schedule. A form is provided on page 18. The schedule below represents minimum maintenance and you should modify your own program based on your needs.

Over and above an inspection prior to and after each use, the stretcher must be inspected by a competent person every 6 months and must be recorded in the equipment inspection manual for this device.

	Each Use	As Needed	Each Month
Disinfecting (this page)	•		
Cleaning (this page)		•	
Inspecting (this page)	•		

When using maintenance products, follow the manufacturers' directions and read the manufacturers' material safety data sheets.

⚠ WARNING

Improper maintenance can cause injury. Maintain the stretcher only as described in this manual.

Important

Disinfectants and cleaners containing bleach, phenolics, or iodines can cause damage. Disinfect and clean only with products that do not contain these chemicals.

9.2 Stretcher Longevity

The stretcher has a 10 year life span and must be removed from service after this time, if no damage has been sustained prior to the 10 year period.

9.2 Disinfecting and Cleaning

Remove the inner rigid PVC liner within the stretcher. To access this PVC inner, loosen the Velcro material at the head end of the stretcher. This will expose the liner.

1. Carefully remove the PVC liner from the stretcher.
2. Hand wash the stretcher in warm water with a mild soap (Ferno & Traverse Rescue recommend Rope & Harness Wash). Once stains are removed, rinse in clear water. DO NOT use excessive force or abrasive items in the cleaning process. Do not use cleaners that contain bleach, Phenolics or iodines.
3. Once the stretcher is clean, hang to dry in a warm, well ventilated area away from direct sunlight or heat source and air dry via natural means. Do not tumble dry.
4. Once completely dry, inspect the entire stretcher and ensure all components are operational and in good condition.
5. Re-insert the PVC lining into the stretcher, roll it up and pack the stretcher into its bag. For storage instructions, refer to STORING THE STRETCHER on page 13.

9.3 Inspecting the Stretcher

After each use, check the stretcher for the following:

- ☐ Are all components present?
- ☐ Is all webbing in good condition with no cuts or frayed edges?
- ☐ Is webbing stitching in good condition with no frayed or broken threads?
- ☐ Are the adjustment buckles operational and do they insert and release smoothly?
- ☐ Is the material of the stretcher intact and not torn or excessively worn?
- ☐ Are the lifting attachment points (orange webbing) in a good condition and free from any wear, tear or fraying?

If inspection shows damage or excessive wear, remove the stretcher from service and retire it. Do not attempt to repair or replace any materials or components.

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10 - CUSTOMER SERVICE

Customer relations and product support are important aspects of each Ferno product.

For assistance with the stretcher please contact your local distributor, Ferno or Traverse Rescue Customer Service as listed below:

Australia (Toll Free)	1800 804 647
	+61 7 3881 4999
Canada	800.543.3766
USA	1.800.733.3766
Telephone (Worldwide)	1.937.382.1451
Internet	www.ferno.com.au
	www.traverserescue.com

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TRAINING RECORD

Date	Name	Training Method

MAINTENANCE RECORD

Date	Maintenance Performed	By

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